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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/697,712 | 10/30/2003 | Manabu Sawasaki | 1324.68598 | 8365 |
| 24978 | 7590 | 10/31/2005 | EXAMINER | |
| GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606 | | | TON, MINH TOAN T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/697,712

Applicant(s)

SAWASAKI, MANABU

Examiner

Toan Ton

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

1. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the cooperative relationships between the pillar spacer and the alignment defect's pixel regions when viewed in a direction perpendicular to the surface of one of the substrates.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al (US 6445437).

Miyazaki discloses a liquid crystal display device comprising (see at least Figures 19-20, 22-23): a pair of substrates provided opposite to each other; a liquid crystal sealed between the substrates; a light-shielding film 36 formed like a grid on one of the substrates; a plurality of pixel regions defined by the light-shielding film; and a pillar spacer 33 provided such that a plurality of regions having an alignment defect of the liquid crystal are formed across adjoining ones of the pixel regions when viewed in a direction perpendicular to the surface of the substrate (see at least Figure 20, herein, it shows a plurality of alignment defect's pixel regions

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formed across adjoining ones of the pixel regions when viewed in a direction perpendicular to the surface of the substrate and a pillar shaper is provided close to the pixel regions).

Miyazaki discloses wherein the pillar spacer provided such that parts of the region having an alignment defect formed respectively in the adjoining pixel regions are substantially equal to each other in surface area.

Miyazaki discloses the pillar spacer formed on the light-shielding film and provided such that it protrudes from the light-shielding film into the adjoining pixel regions when viewed in the direction perpendicular to the surface of the substrate.

Miyazaki discloses color filter layers in a plurality of colors (RBG) formed in the pixel regions and the pillar spacer provided such that it protrudes into the adjoining pixel regions in which the color filter layers are formed in different colors.

Miyazaki discloses the device employing a thin film transistor formed in each of the pixel regions.

Miyazaki discloses an alignment film formed on the pillar spacer and rubbed in a predetermined rubbing direction, wherein the pillar spacer is provided in a position that is biased in the direction opposite to the rubbing direction from the intersection of the light-shielding film.

Response to Arguments

3. Applicant's arguments filed 09/30/05 have been fully considered but they are not persuasive.

Miyazaki fails to disclose a pillar spacer provided such that a plurality of regions having an alignment defect of the liquid crystal are formed across adjoining ones of the pixel regions. In contrast, Miyazaki discloses a "single region" (not plurality of regions).


Miyazaki clearly shows in at least Figure 20, herein, it shows a plurality of alignment defect's pixel regions formed across adjoining ones of the pixel regions (a pillar shaper is provided close to the pixel regions). Further, there are no cooperative relationships claimed between the pillar spacer and the alignment defect's pixel regions when viewed in a direction perpendicular to the surface of one the substrates.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 18, 2005


**TOANTON
PRIMARY EXAMINER**